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# Healthy Food Promotion: The role of information framing, cognitive processes, and social influence

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# Cornhusker Economics

## Healthy Food Promotion:

### The role of information framing, cognitive processes, and social influence

Market Report	Year Ago	4 Wks Ago	
<b>Livestock and Products, Weekly Average</b>			
Nebraska Slaughter Steers, 35-65% Choice, Live Weight. . . . .	123.79	142.94	134.00
Nebraska Feeder Steers, Med. & Large Frame, 550-600 lb. . . . .	179.32	141.17	186.11
Nebraska Feeder Steers, Med. & Large Frame 750-800 lb. . . . .	148.94	157.48	164.63
Choice Boxed Beef, 600-750 lb. Carcass. . . . .	215.51	232.55	245.40
Western Corn Belt Base Hog Price Carcass, Negotiated . . . . .	70.35	66.39	75.70
Pork Carcass Cutout, 185 lb. Carcass 51-52% Lean. . . . .	81.76	76.63	90.20
Slaughter Lambs, woolled and shorn, 135-165 lb. National. . . . .	132.10	159.87	166.28
National Carcass Lamb Cutout FOB. . . . .	241.09	385.76	420.43
<b>Crops, Daily Spot Prices</b>			
Wheat, No. 1, H.W. Imperial, bu. . . . .	3.80	3.12	3.15
Corn, No. 2, Yellow Columbus, bu. . . . .	3.60	3.28	3.37
Soybeans, No. 1, Yellow Columbus, bu. . . . .	9.56	8.73	8.39
Grain Sorghum, No.2, Yellow Dorchester, cwt. . . . .	5.66	5.46	5.73
Oats, No. 2, Heavy Minneapolis, Mn, bu. . . . .	2.57	2.74	2.84
<b>Feed</b>			
Alfalfa, Large Square Bales, Good to Premium, RFV 160-185 Northeast Nebraska, ton. . . . .	128.00	127.25	140.00
Alfalfa, Large Rounds, Good Platte Valley, ton. . . . .	80.00	72.50	70.00
Grass Hay, Large Rounds, Good Nebraska, ton. . . . .	85.00	65.00	65.00
Dried Distillers Grains, 10% Moisture Nebraska Average. . . . .	128.50	104.00	101.00
Wet Distillers Grains, 65-70% Moisture Nebraska Average. . . . .	49.50	41.00	40.00
<b>* No Market</b>			

Rates of overweight and obesity in the U.S. have increased steadily over the past 50 years, with serious consequences for people's health, livelihoods, and quality of life. Estimates of U.S. adult and childhood overweight and obesity that were based on measurements of height and weight, rather than self-reported data, were collected in a nation-wide study conducted in 2011-2012. These data suggest that over one-third of adults were obese and another third were overweight, while 17 percent of children were obese and 15 percent overweight. Overweight and obesity are associated with a variety of negative outcomes that accrue both to individuals and to society. Health conditions associated with overweight and obesity include an increased risk of associated non-communicable diseases, such as type-2 diabetes, certain types of cancer, hypertension, and heart disease. Higher rates of obesity lead to increased private and public health care costs and other indirect economic impacts, such as decreased productivity of workers due to missing more days of work due to health problems and lower productivity even when present at work. Obesity can also contribute to reduced quality of life through a variety of channels, including increases in physical discomfort, social stigma associated with obesity, lower self-esteem and higher incidence of depression.

As rates of overweight and obesity have risen, efforts have been implemented at various levels

strategies included providing objective nutritional information to consumers on packaged foods via the nutritional facts panels that continue to be placed on the sides or backs of food packages. A like-minded rule about calorie labeling in restaurants is to go into effect soon (though it has already been adopted in some places throughout the U.S.). Other efforts take aim at addressing a lack of healthy food options in areas known as food deserts, which have been proposed as a causal factor of obesity. Some researchers and firms have begun to conduct limited experiments with incentives for weight loss, and larger scale incentives—through the use of taxes on sugary beverages—have been implemented in a few locations, including the city of Berkeley, California and in Mexico.

While many of the strategies targeting obesogenic factors have not yielded the results that policymakers and researchers anticipated, there may be ways to make interventions more effective. Specifically, the way that nutritional information is presented is important. There are three ways that the effectiveness of nutritional information can be enhanced: First, strategies should provide context for the nutritional information, which will help people understand the nutritional content of the food. Second, drawing people's attention to the important relationship between diet and health may make them more likely to consider the healthiness of the foods they purchase. Third, strategies that increase the relevance of health messages by providing social information about the attitudes or choices of their peers may be more motivating than objective information, increased access, or taxes/subsidies alone. A common element of these strategies is that they are designed to encourage individuals to consciously consider the potential health consequences that they face in the future when they choose to eat less healthy foods.

### ***Nutritional Information in Context***

Behavior before and after the implementation of the nutritional facts panel and New York's menu labeling law illustrate the limitations of purely informational strategies to increase healthy choices, but research on people's responses to nutritional information sheds light on ways in which that information can be made more effective. For instance, providing objective information on calories did not significantly reduce the purchase of sugar-sweetened beverages in a study of

beverage choices among low-income or minority adolescents. However, when the calorie information was shown as a percentage of daily-recommended calories, purchases of sugary beverages decreased by 40 percent. Presenting calories as the amount of time the adolescents would have to spend exercising to burn off the calories had an even greater effect, reducing the purchases of sugary beverages by 50 percent. Likewise, warning labels describing the health dangers associated with overconsumption of sugary drinks significantly reduced parents' selection of these beverages versus both a condition in which the drinks were not labeled and a condition in which parents were given information about the number of calories each drink had. After a large chain of supermarkets implemented a simple nutritional quality rating system, shoppers significantly reduced their purchases of unhealthy foods. These findings show the importance of providing information in a way that is salient, is easy to interpret, and is in a useful context.

### ***Motivation, Salience, and Food Choice***

Decisions about food are often less conscious and deliberate than other decisions. We rely upon habits or subconscious desires when choosing foods rather than explicitly considering all of the foods available and the taste and health trade-offs that each option represents. To counteract these subconscious processes, healthy food promotion strategies must be disruptive, prompting people to instead think consciously and deliberately about the foods they purchase. Research on food choice and the brain illustrates the difficulty of overcoming subconscious responses to food. Two studies on active dieters and non-dieters show that prompting non-dieters to consider the healthfulness of the food when making a food choice results in behavior and brain activity that resemble the behavior and brain activity of people who are successfully dieting. In contrast, we automatically take taste into account when making food choices. A prompt to think about taste (rather than health) did not change behavior or neural activity when individuals made food choices in a setting in which no prompts were given. Other researchers have found that the brain processes taste information more quickly than it processes health information.

Research on healthy food labels that use simple graphics to synthesize nutrition information strengthens the findings of research on food choice and the brain. In one study, participants reported that information about calorie content was one of the most important variables to them when making food choices. However, calorie information presented as plain text was markedly less effective than a nutritional rating system based on a traffic light (where a red light communicates that to achieve a healthy diet a food should be eaten rarely, while a green light means that a food could be consumed frequently) when participants made decisions.

A study comparing the comprehensibility, credibility, and efficacy of several types of food labels in helping people identify healthier products demonstrated that front-of-pack labels and simple labels—stars and smiley faces—were more effective than back-of-pack labels and more complex labels, respectively. Eye-tracking research, which documents what people are looking at, highlights the impact of attention on choice. Unsurprisingly, people spend more time looking at labels that are *attention-getting* e.g., colorful or larger, and the more time an individual spends looking at a label, the more likely the individual is to choose that product.

Supermarket sales data provide support for the importance of label design. In an in-store intervention, simpler labels—highlighting differences in one nutrient—led to a greater increase in purchases of healthier items than a more complex label. Labels featuring simple, eye-catching graphics that help consumers compare products or interpret nutritional information may be more effective at influencing choice than more complex formats, including context-free text-based information. This may be due to the higher likelihood that consumers will notice and attend to the information. Effective labels may also disrupt subconscious decision-making habits and prompt people to consider the health consequences of their food choices as they are making a decision.

### ***Social Norms and Choice***

When people view a particular behavior as a norm i.e., an informal social rule, they are likely to adhere to that behavior. Providing people with information about social norms has been used to influence behavior in a number of domains, including binge drinking, energy use, and food choice. Research on social norms and food indicates that norms contribute to an in-

creased intention to consume a healthier diet and to actual healthier food choices.

One way in which social norms may enhance the effectiveness of healthy food interventions is by targeting groups at high risk for obesity. Research on shelf and front-of-package labeling has only occurred with a non-targeted sample drawn from the general population. Likewise, research on social norms and food choice has been implemented in the context of the general population. Combining on-shelf or front-of-package labels with social norms in an attention-grabbing format may communicate social norms to an audience at greatest risk of diet-related health problems.

Though many of the approaches that were described above to make healthy food promotional efforts more effective have not yet been tested in the field, preliminary research indicates that they may provide important tools to combat diet-related health problems. Changing food consumption behavior is complicated by the fact that food choices tend to be made subconsciously. To a certain extent, this is necessary for us to be able to get through the day; it has been estimated that we make approximately 200 choices related to food a day, and if we put significant effort into thinking through each of them, we would get little else done. However, the long and steady rise of obesity rates in the U.S. (and elsewhere) requires that we find a way to improve the health of our diets.

### **Further Reading:**

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